## Improving Science, Technology, Engineering, and Mathematics Education

Written by Mike Honda Friday, 04 November 2011 11:10

The American Dream remains an aspiration for millions of American families throughout the United States, just as it was for me in my youth. Achieving the American Dream starts with a solid education.. The American public school system should be the equalizer of economic opportunity throughout the US, one that can elevate and enhance a child's creativity and thought, allowing he or she to be a competitive player on the world scene, just as it was 40 years ago when I watched Apollo 11 land on the moon.

Yet, as our nation's science, technology, education and mathematics (STEM) workforce heads toward retirement, too few students are motivated to replace them. American students consistently display lower scores on most STEM-related assessments than their peers in countries across the world. The US National Assessment of Educational Progress showed that from 2004 to 2008, 41 percent of 17-year-olds do not have a basic understanding of medium-difficulty math procedures. Furthermore, Programme for International Student Assessment comparisons in 2006 show American students ranking 21st out of 30 in science literacy, and 25th out of 30 in math literacy, among students from developed countries.

This crisis facing our country goes to the heart of what our nation needs to keep competitive in an increasingly global economy. American youth must take giant leaps in our classrooms toward innovation and creativity that will push the boundaries of science, engineering, mathematics and technology research and study. Giant leaps toward good paying wages after obtaining an undergraduate degree in STEM related fields. Giant leaps to create a dynamic and creative workforce that is competitive on the global market.

The STEM Education and Innovation Act that I introduced this week does exactly this – it creates leaps and bounds in educating our students in public schools throughout America - by raising the profile of state and federal science, technology, engineering, and mathematics initiatives.

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STEM Education is not a privilege, it is a right and a necessity. It is essential for our nation so that the youth of American can once again be competitive with their international peers and attain satisfying, well paying jobs. It is essential so that American "Job Creators" will be able to find future employees with the right skill sets to meet their needs right here at home.

## The bill has three concrete components:

- 1. It establishes an Office of STEM Education at the Department of Education, making a national and international statement that the STEM fields are a national priority. This office can speak with articulation on why we must compete at the highest level on international benchmark tests such as the PISA, NAEP and TIMMS tests.
- 2. It provides federal support for State Consortia on STEM Education, helping the States exercise their power to create, maintain, and grow their STEM platform. The bill acknowledges existing public-private collaborations and will grow such efforts in the STEM community. These state consortia are already springing up at the grassroots level. Through a federal matching grant, we are reaffirming our nation's priorities while allowing the States to dictate and control their educational agenda by identifying best practices and implementing state standards.
- 3. Finally, the bill will boost American ingenuity and innovation by promoting the development of transformational technology for the classroom through the Education Innovation Project. Through a small federal dollar investment, small startup companies and the private market will deliver a huge return of educational technological innovation will be achieved.

It's the aspiration of all Americans- rich and poor, rural and urban, public school and private school, Republican and Democrat – to realize the American dream for their children. The STEM Education Innovation Act builds up the platform of local educational communities all throughout the United States to collaborate and consolidate a solid educational platform holding up the pillars of science, technology, engineering and mathematics. By supporting STEM efforts in American public schools, we are investing in the future dreams of American youth. We are also

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investing in American ingenuity, innovation, and infrastructure: ensuring an educated population to carry us forward into the future. I hope you will support this effort to create the next wave of American ingenuity and innovation.